ATOPIC DERMATITIS: DISEASE BACKGROUND, PREVALENCE, AND IMPACT ON QUALITY OF LIFE

AD Is a Multi-System Disease

many other body systems, and therefore, it should not be thought of as only a skin disease. Whole-patient care for AD-not just skin care-is

Atopic dermatitis (AD) is associated with effects on

required for successful treatment.



Severe AD Is Associated With a Higher

Comorbidities Severe AD is associated with a higher prevalence of comorbid chronic health disorders, including: Asthma Food allergies Hay fever

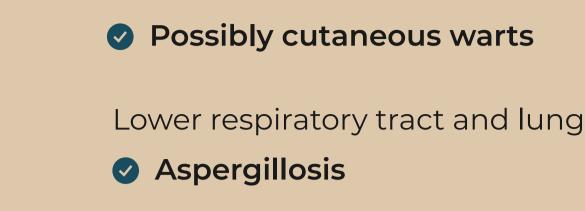
Prevalence of Comorbid Chronic Health Disorders



More severe AD is correlated with: Worse overall health
Increased healthcare utilization

- Impaired sleep
- Health outcomes are worse for patients with both AD and sleep disturbances.
- Mental Health Infections

Possibly cutaneous warts Conduct disorder



- Heart, brain, and bones
- Tuberculosis
- Other systemic comorbidities Obesity
- Hypertension

Children

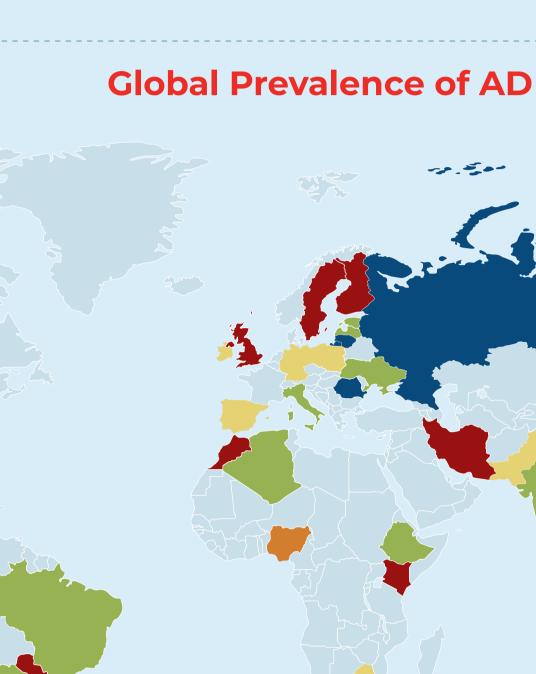
and subsequent risk of emotional problems in childhood appear to increase

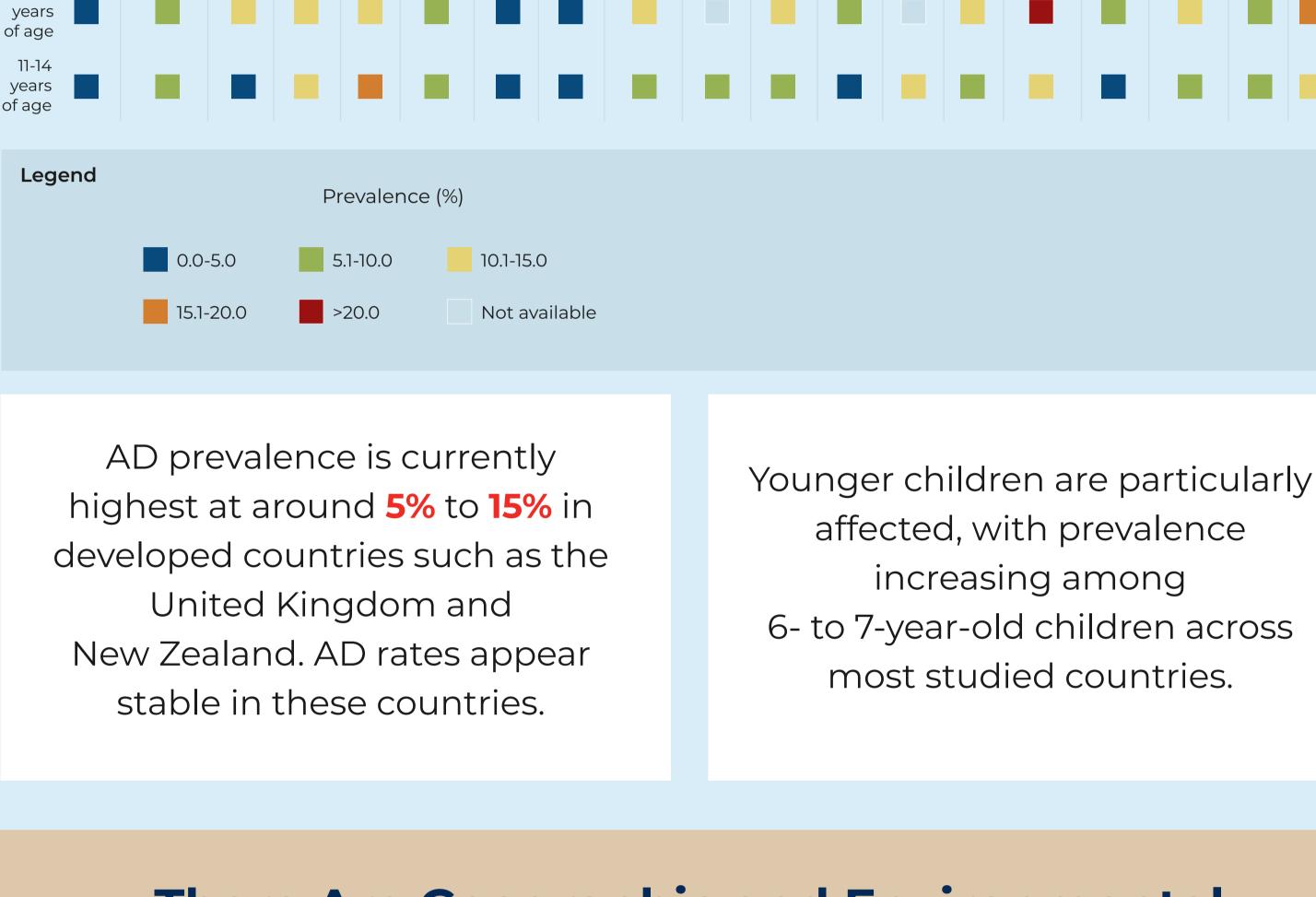
- problems has been identified. The inverse is also true—psychosocial/mental health
 - Allergic
- The Prevalence of AD Varies Throughout the World

of adults. Adults



6-7





New

Increased risk More affluent area Unsafe, unsupportive, underdeveloped **Increased risk** neighborhoods for children

Risk factors can vary within a country

Location has stronger influence than genetics



Lifestyle

Obesity

Fish

Fast food

Factor

Climate

Low outdoor temperature

UV light exposure

Geography

Setting

Urban

- **Emotional impact** Behavioral problems

Clothing

>50% of children with AD

with them

Itching and scratching

Disrupted sleep

AD had the second largest impact on quality of life (QOL) in children as measured by the Children's Life Quality Index (cerebal palsy ranked first). Impacts to pediatric QOL include: Physical health and functioning

Pollution/tobacco smoke exposure

Irritability

✓ Play (especially

outdoors)

Pain or bleeding at site Dietary restrictions

Crying

Swimming

36% of children with

AD said AD affects

their self-confidence

reported that other children have been teased and adults avoided interacting or bullied about their AD AD also affects the patient's family. Parents of children with AD report:

Lack of sleep

AD Impacts QOL in Adult Patients

The burden of AD compared with other disorders:

Atopic dermatitis (A)

Burden of seeing child's suffering

Time spent on treatment

The impact of AD has been shown to be greater than that of hypertension, diabetes,

Females

0 50,000 100,000 150,000 200,000 250,000 300,000 350,000

336 College Students

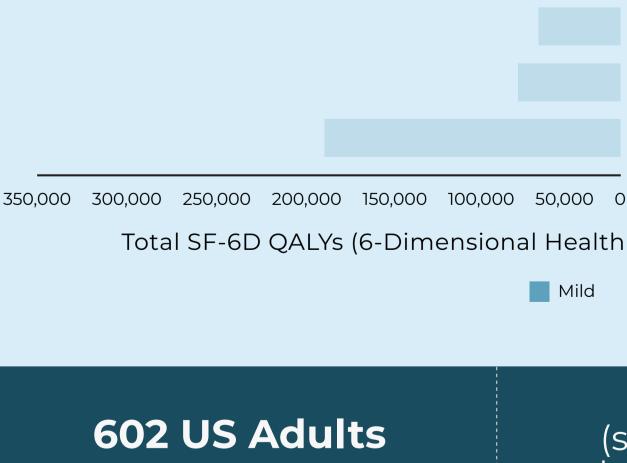
14% career progression hindered

27% teased or bullied

32% shaving or makeup

use limited

27% of children with AD



19.6% dryness/scaling most

burdensome symptom

39.1% avoided social situations

51.3% lifestyle limited

54.4% itching most

burdensome symptom

52,400

1. Dreckers IA, et al. *PLoS One*. 2012;7(7):e39803.

6. Nutten S. *Ann Nutr Metab.* 2015;66(suppl 1):8-16.

14. Weidinger S, et al. Nat Rev Dis Primers. 2018;4(1):1.

4. Flohr C, Mann J. Allergy. 2014;69:3-16.

2. Drucker AM, et al. J Invest Dermatol. 2017;137(1):26-30.

3. Eckert L, et al. J Am Acad Dermatol. 2017;77(2):274-279.e3.

5. Narla S, Silverberg JI. Ann Allergy Asthma Immunol. 2018;120(1):66-72.e11.

13. Silverberg JI, et al. *J Allergy Clin Immunol Pract*. 2019;7(4):1246-1252.e1.

7. McKenzie C, Silverberg JI. Ann Allergy Asthma Immunol. 2019;122(2):198-203.e3.

and anxiety/depression.

Total SF-6D QALYs (6-Dimensional Health State Short Form Quality-Adjusted Life Years) Lost to Morbidity Moderate

Males

349 US Adults self-reported mental health comorbidities)

Severe

35% clothing choice affected

- Direct costs do not include over-the-counter products Lost productivity does not include missed days not associated with medical visits or "presenteeism"
- Annual indirect cost per person was \$2,400

Includes direct costs, lost productivity, and decrements in QOL

References

in 2015 US dollars.

- 8. Odhiambo JA, et al. *J Allergy Clin Immunol*. 2009;124(6):1251-1258.e23. 9. Paller A, et al. Am J Clin Dermatol. 2018;19(6):821-838. 10. Silverberg JI, Simpson EL. Pediatr Allergy Immunol. 2013;24(5):476-486. 11. Silverberg JI, et al. *J Invest Dermatol*. 2015;135(1):56-66. 12. Silverberg JI, et al. *Ann Allergy Asthma Immunol*. 2018;121(5):604-612.e3.





Systemic Associations of AD AD is significantly associated with multiple serious infections. Skin Staphylococcus aureus colonization

Attention-deficit/hyperactivity disorder Anxiety

Molluscum contagiosum Depression

- Eczema herpeticum Suicidal ideation/self-harm
- A temporal relationship between early AD Aspergillosis
- Systemic

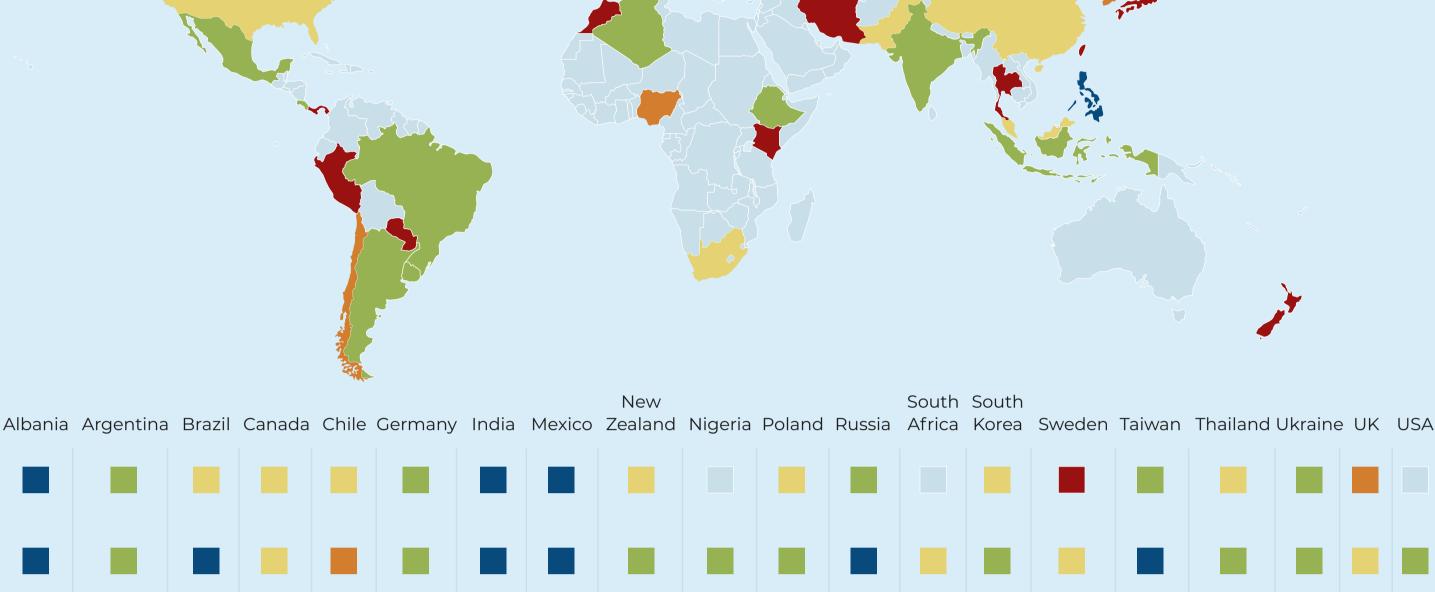
- the risk of AD.
 - Asthma Seasonal allergy

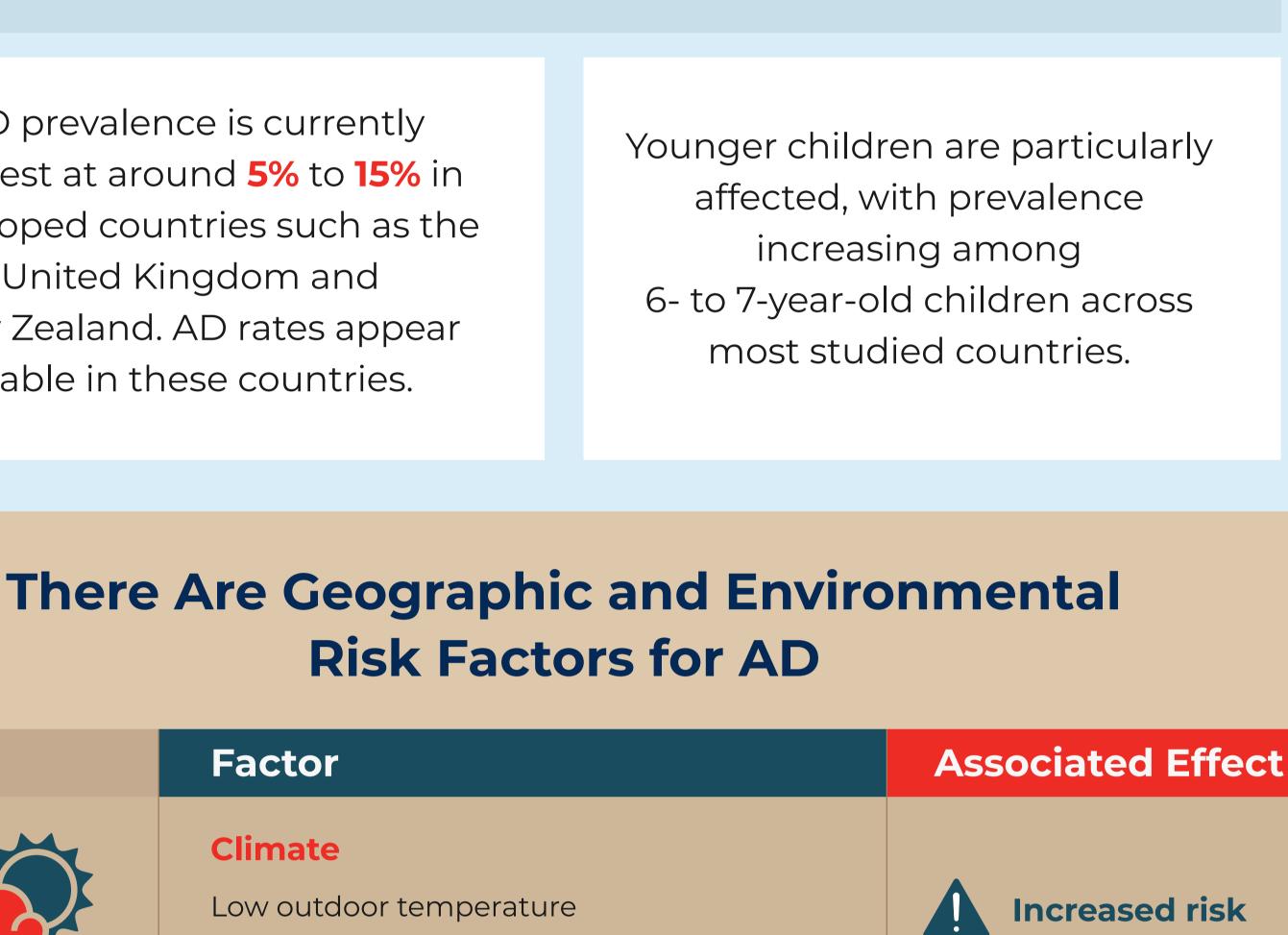
Eosinophilic esophagitis

Food allergy

AD is a chronic inflammatory skin disease affecting up to

20% of children and up to 3%





Protective

Increased risk

Increased risk

Protective

Increased risk

Increased risk

Increased risk

Variable

Diet Fresh fruits **Protective**

- Breastfeeding Delayed weaning
 - **AD Impacts QOL in Children**
 - Impaired social functioning

Interference with activities of daily living

Bathing

Atopic dermatitis (B) Anxiety/depression Autoimmune condition Diabetes Food allergy

Heart disease

High blood pressure

- **29.8%** anxiety
- 33.2% sleep disorder

31.2% depression

- AD Burden of Illness Is High The total annual burden of AD in 2004 was equivalent to over \$5 billion
- Comparable to psoriasis
- This activity is supported by an educational grant from Pfizer. This activity is jointly provided by AKH Inc., Advancing Knowledge in Healthcare and Catalyst Medical Education, LLC.